ABSTRACT

A decimation filter in which a coefficient word length
of a last-stage FIR filter is shorter than that which attains
a necessary attenuation rate, and an interpolation filter in
which a coefficient word length of a first-stage FIR filter
is the same. The coefficient is arranged such that a region
in which attenuation is insufficient is caused intensively
around a Nyquist frequency. The attenuation in such a region
relative to the first or last-stage FIR filter is enhanced so
as to ensure sufficient attenuation, by its preceding or
following FIR filter. As a result, sufficient attenuation is
maintained in an inhibition region while maintaining a
relatively small circuit size.